

Service Date: June 12, 1984

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

* * * * *

IN THE MATTER of the Complaint Of)	
The MONTANA STATE AFL-CIO And)	UTILITY DIVISION
The MONTANA STATE BUILDING AND)	
CONSTRUCTION TRADES COUNCIL)	
And The INVESTIGATION BY THE)	DOCKET NOS . 83.11.82
MONTANA PUBLIC SERVICE COMMIS-)	and 84.1.3
SION Into The Alleged Safety Defects)	
In The Montana Power Company's New)	ORDER NO. 5057a
16-Inch Natural Gas Transmission Line.)	

ORDER

APPEARANCES

FOR THE MONTANA STATE AFL-CIO AND THE MONTANA STATE BUILDING AND
CONSTRUCTION TRADES COUNCIL:

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FOR THE COMMISSION:

Eileen E. Shore, Chief Counsel, Montana Public Service Commission, 2701 Prospect Avenue, Helena, Montana 59620

BEFORE:

THOMAS J. SCHNEIDER, Chairman
JOHN B. DRISCOLL, Commissioner
HOWARD L. ELLIS, Commissioner
CLYDE JARVIS, Commissioner
DANNY OBERG, Commissioner

BACKGROUND

On November 18, 1983, the Public Service Commission received a report submitted by Mr. Wesley A. Pleshko, DMT-18, Staff Engineer for the U.S. Department of Transportation, Materials Transportation Bureau, 555 Zang Street, Lakewood, Colorado, entitled "Field Evaluation Report Gas Transmission System." The report contained allegations of potential violations by the Montana Power Company of safety regulations applicable to its construction of the 16-inch natural gas transmission line, under the federal Natural Gas Pipeline Safety Act of 1968, as amended, 49 U.S.C. 16071 et seq. On November 23, 1983, the Commission received a letter from Mr. James W. Murry, Executive Secretary, Montana AFL-CIO, which requested that the Commission investigate the allegations of Mr. Pleshko and hold public hearings on those allegations. Mr. Murry also requested that the Commission investigate allegations by Mr. Larry Williams, an employee of Gamma Sonics.

In response to Mr. Murry's letter, the Commission on December 1, 1983, issued a Notice of Complaint, Notice of Procedural Conference, and Notice of Public Hearing. The complaint was assigned Docket No. 83.11.82.

Under a long-standing agreement with the U.S. Department of Transportation, the Montana Public Service Commission has assumed responsibility for enforcing the Natural Gas Pipeline Safety Act as it applies to intrastate pipelines.

Telephone conversations with the Commission staff and personnel of the Department of Transportation indicated that DOT did not consider the complaint docket an appropriate forum for the Commission to exercise its enforcement responsibilities under the Natural Gas Pipeline Safety Act. That understanding was confirmed in a letter from George W. Tenley, Jr., Acting Chief Counsel, Research and Special Programs Administration, U.S. Department of Transportation to Eileen E. Shore, the Commission's Chief Legal Counsel, dated January 3, 1984, received by the Commission January 5, 1984.

In order to clarify for all interested persons the Commission's intention of fulfilling its enforcement responsibilities under the Natural Gas Pipeline Safety Act, on January 5, 1984, the Commission unanimously voted to initiate its own independent investigation of the allegations of Mr. Pleshko and Mr. Williams. On January 10, 1984, an Order Initiating Investigation, Docket No. 84.1.3 was issued.

Mr. Pleshko's report includes a "Violation Report - Gas Transmission System-Construction" listing five (5) deficiencies found on the Montana Power Company pipeline.

Mr. Larry Williams, an X-ray technician with Gamma Sonics, which has a contractual responsibility to check the welds made on the construction project, inspected welds on the Montana Power Company's pipeline and charged the pipeline contractor with careless and poor construction practices.

FINDINGS OF FACT

1. On March 6, 1984, pursuant to proper notice, a hearing was held. An evening hearing was held on March 6, 1984. The hearing concluded on March 15, 1984.
2. The AFL-CIO sponsored seven witnesses, Wesley Pleshko testified on his report and Montana Power Company sponsored three witnesses.
3. The five probable violations found by Pleshko are:
 - 1) No supporting backfill under the pipe.

- 2) Not enough care taken to prevent large rocks from being augered into the ditch and hitting the pipe possibly damaging the pipe coating.
- 3) There was no effort to protect the bottom of the pipe from rock in the bottom of the ditch.
- 4) Permanent field repairs were made on holes drilled in the line pipe 63 by vandals by welding a threadolet on the pipeline, plugging the threadolet with a screw plug and finally welding the threads on the plug.
- 5) The Montana Power Company construction specifications were not followed in paragraphs 8.4, 10.1, 10.2, 15.0, 16.0 and 16.2 which are all related to lowering in, coating protection and ditch condition. Paragraph 13.1 pertains to welders quality of work.

4. Probable violation number one was supported by testimony of Michael Curran, Robert Putzker, Stephen A. Bergman, and Charles Kay. Curran testified that he has been in the pipeline construction business for 40 years. (TR. Vol. II, p. 69, ll. 4-5). The pipeline crosses his ranch for about 15 miles. His testimony related to the observations he made of the construction procedures. Curran testified that he did not observe the use of fines or fine-grained soil in the bottom of the ditch. (TR. Vol. II, p. 83, ll. 2-3). He did not observe any other type of padding in the bottom of the ditch, other than styrofoam blocks. (TR. Vol. II, p. 83, ll. 5-6)

Putzker's testimony was supported by a number of photographs he had taken while he was on the right-of-way that crosses the Curran ranch. The pictures show the use of styrofoam blocks, with much rock in the bottom of the ditch.

Bergman is a pipeline consultant with many years of experience in the design and construction of pipelines. He is also Chairman of the B31.8 subcommittee. He testified that "the voids underneath the pipe as indicated in pictures and in reports, I have concluded that parts of the pipeline, especially in rocky areas, are not in conformance with Part 192. (TR. Vol. II, p. 223, ll. 4-7). Kay's photographs also showed lack of support under the pipeline.

5. Probable violation number two was supported by testimony of Curran, Putzker and Bergman.

Curran testified that he witnessed rock being augered onto the pipeline and that rock shield was draped over the top of the pipe. The rock shield was not tied around the pipe.

Putzker's photographs show examples of the backfilling operations, the amount of rock being augered into the ditch, the rock in the ditch and the draping of the rock shield.

Bergman testified that, after reviewing the photographs in this proceeding, the rock shield was not properly installed and the backfilling procedure was not acceptable.

6. Probable violation number three was addressed by Curran, Putzker and Bergman.

Curran witnessed rock in the bottom of the ditch and improper use of rock shield.

Putzker's photographs show rock in the ditch, and in the material used for backfilling.

Bergman testified, "Well, I think the worst condition that prevails as far as the backfilling operation is concerned is the fact that the rock shield was not wrapped around the pipe in its periphery and tied there with a tape or in some manner causing the rock shield to be firmly tied all the way around the pipe." (TR. Vol. I, p. 232, ll. 6-11). "Rock shield is merely an additional safety factor in addition to the coating and the wrapping. We can't afford to put too much stress on the fact that we used rock shield." (TR. Vol. II, p. 232, ll. 21-24) "I don't care what it's wrapped with -- Well, within reason, -- and there's a rock in the ditch, there's likelihood of a buckle eventually forming." (TR. Vol. II, p. 233, ll. 11-15)

7. Probable violation number four:

Jack Overly, Chief, Western Region Pipeline Safety, Office of Operations and Enforcement, Lakewood, Colorado 80228, on February 1, 1984, submitted the following recommendation for disposition of probable violation number four, 192.713(a)(1).

Recommendation

I recommend that the probable violation stands but that disposition is by warning letter to Montana Power similar to one we utilize under 49 CFR 190.205.

The letter would contain:

1. The violation.

2. A statement to the effect that no further action will be taken in this instance only.
3. This or other methods of repair used in the future, not in compliance with the regulation would be subject to enforcement.
4. You may wish to recommend the waiver procedure for future deviations from the regulation.

This, in effect, would conclude the enforcement of this probable violation.

Under the 5th probable violation, Montana Power has requested clarification where welder quality is referred to in Montana Power specifications (13.1). This reference is not a violation. Weld quality and nondestructive testing was not investigated during our inspection. The reference was meant to convey that Mr. Pleshko noted a high weld reject by nondestructive testing, 28 to 30 percent, indicating that Montana Power should probably be checking that area. Therefore, please delete the last sentence of the first paragraph of probable violation 5 which states "Paragraph 13.1 pertains to welders quality of work."

On April 16, 1984, the Commission granted Montana Power Company's request for a waiver for the company's repair procedure for damage caused by drill holes.

On May 21, 1984, the Commission was advised by the Materials Transportation Bureau (MTB) of the U.S. Department of Transportation, that it objects to the grant of this waiver. Accordingly, under Section 3(d) of the Natural Gas Pipeline Safety Act of 1968, as amended, the waiver is hereby stayed.

8. Probable violation number five relates to ditch condition and backfilling and was addressed by the previous witnesses.

9. Thomas Reeder testified for the AFL-CIO as a nondestructive testing consultant. On March 2, 1984, Reeder reviewed the repair and tie-in welding X-ray reports, the mainline X-ray reports and some film at the Montana Power Company's offices in Butte, Montana. His general conclusion was that the reports were incomplete and there were irregularities in the Daily

Radiographic Reports. Some reports had a notation in the comments column, "No repair film," but had been marked "accept" followed by a signature. Other reports indicate a number of welds were left without any disposition (accept or reject) whatsoever. Questions were raised that indicate the records were changed from reject to accept or that the defect had been changed. Reeder reviewed and interpreted film where the report indicates that a particular weld was acceptable, and his interpretation was that it contained three cracks. (TR. Vol. I, p. 304, ll. 14-23)

10. Lawrence Williams testified for the AFL-CIO as a Level 2 X-Ray Technician who was employed by Gamma Sonics and worked on this pipeline project. He testified that some of his reports do not accurately reflect what he saw on the film. The report indicates that the defect is an incomplete fusion when the actual defect is a crater crack. A crater crack over 5/32 would have to be cut out but an incomplete fusion can be repaired under federal regulations. Williams testified that the Montana Power Company's welding inspector instructed him to change the report from "crater crack" to "incomplete fusion." He indicated he started putting a star by each inaccurate report so it could be identified at a later date.

During his testimony he discussed a specific instance when he was aware of the fact that film was missing from the project.

11. Testimony from Bergman (TR. pp. 223-224, 229) and Curran (TR. pp. 75, 94) discussed construction practices that caused substantial stresses on the line. As noted in the testimony, there were occasions when the pipe was forced to fit the ditch. This results in increased stresses, forcing the pipe to spring. Since this is a practice that does not conform either to federal regulations or good construction practices, the Company's plan should address the issue.

12. Paul Schmechel, President and Chief Executive Officer of Montana Power Company testified at the hearing as a policy witness. He committed Montana Power Company to taking all measures necessary to assure the safety and reliability of the new line. He stated that Roger Rawls has been instructed to prepare a plan to demonstrate that the line is both safe and will be reliable in the long term.

13. Roger Rawls, Engineer, Montana Power Company, discussed testing of the line, implementation of the proposed plan and his observations of excavations that he personally

witnessed. He stated that he was comfortable with what he has seen, but the testimony given in this proceeding made him uncomfortable.

14. Carl Patterson, Montana Power Company, inspector, testified to Montana Power Company's welding procedures, welding repair procedures and procedures for qualifying welders. He discussed what he remembers about the conversation with Larry Williams and why he placed a star on certain weld reports.

15. Testimony presented by the AFL-CIO was, for the most part, unrebutted by Montana Power Company. This testimony establishes the fact that there are grave problems with the construction practices used on this project. Testimony revealed a pattern of sloppy work, cost cutting measures and inadequate oversight by Montana Power Company officials. Seldom, if ever, has the Commission encountered such clear and convincing evidence supporting a party's allegations. Although testimony in this case focused on construction practices in rocky terrain, the Commission finds that that testimony also suggests the possibility that the entire line may be subject to serious problems, given the pattern revealed in the hearing. Although evidence regarding construction in nonrocky areas is not sufficient to make particular findings of probable violations for those areas, the Company's plan should specifically address corrective measures for the entire line -- not just those portions that were highlighted in the hearing.

16. The Commission is deeply concerned that MPC ever allowed its major transmission line to be constructed in such a manner that major concerns over the lines reliability and safety would be the subject of a major investigation. The fact that the pipeline deficiencies reported were largely uncontested points not only to contractor faults but Montana Power Company management failure to properly oversee construction. Evaluation and correction of those problems will result from this order but Montana Power Company must review its internal management controls to insure that its shareholders and its ratepayers are never again subjected to added costs for repairs and failure to comply with DOT regulations, and industry standards for pipeline construction. Montana Power Company management controls should have prevented the grave problems associated with its construction. Better quality control, field supervision, and construction oversight by the Montana Power Company could have prevented the sloppy work, cost cutting measures, and code compliance

problems from ever happening. The violations presented in testimony concerning lack of proper pipeline bedding, rock in the ditch, and questionable records were all very evident. Montana Power Company failed to protect its investment in the pipeline. Although the Commission has ordered a separate accounting of all costs associated with the repair project in order to protect ratepayer investment, it is clear that Montana Power Company's poor oversight of the project will delay the replacement of an aging pipeline and cause very substantial additional costs to be incurred.

17. The Commission interprets Paul Schmechel's appearance and representations as acknowledgment that serious problems exist. The Company's commitment to correcting these problems is a good first step. The Commission continues to believe that the evidence presented mandates thorough remedial measures.

18. Although not relevant to the Commission's duties under the Natural Gas Pipeline Safety Act, the failure by the Company to secure a bond from the Haines Pipeline Company is of real concern. The failure to secure that protection, especially in view of the testimony regarding work quality, strongly suggests a lack of management prudence and an indifference to adequately protecting the Company's shareholders and ratepayers alike.

19. The Commission is very concerned about whether excavations to correct defects will produce an adequate number of inspection points. In view of the testimony given, more inspections should be made to verify proper bedding in the rocky areas, in areas of bends, etc. These inspection points should be in addition to the excavation sites now planned. A more systematic procedure should be developed to insure all portions of the line have proper support. This approach is appropriate given testimony that the problems are chronic, caused by consistently poor construction practices.

20. By its discussion of remedial measures, the Commission does not mean to suggest that these are the only measures that should be taken. The intent here is merely to highlight for MPC's information those portions of the record that reveal the most glaring problems. The Commission understands that work on the line is necessarily dynamic and that additional measures might well be found appropriate as work progresses. This approach is consistent with concerns acknowledged by Paul Schmechel in his letter to Eileen E. Shore of March 16, 1984:

I understand your view that the PSC must be insulated from an argument that reliance by MPC on any comments advanced by the PSC staff would preclude later questions of either the plan or the conclusions suggested by its implementation. I assure you that our intent in seeking your involvement is simply to benefit from your perspective and ideas. MPC assumes any and all risks associated with the development and implementation of a plan independent of this proceeding, and fully respects the PSC's right to issue an order consistent with its jurisdiction and based solely upon the record in this case.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the matters addressed by these dockets pursuant to the Natural Gas Pipeline Safety Act of 1968, as amended, 49 U.S.C. 16071 et seq.; 49 CFR, Part 192.

2. Based on unrebutted substantial credible testimony, probable violations of the following regulations exist:

- a. 192.319(b)(1) requires backfilling to be done in a manner that provides firm support under the pipe.
- b. 192.319(b)(2) requires backfilling to be done in a manner preventing damage to the pipe and coating.
- c. 192.416(d) requires the pipe coating to be protected from adverse ditch conditions.
- d. 192.303 requires that construction follow written comprehensive specifications .
- e. 192.319 requires that installation of pipe minimizes stresses.

3. Testimony at the hearing demonstrates violations exist concerning the records required for nondestructive testing pursuant to 192.243(f) and 192.245(a).

ORDER

1. Montana Power Company shall correct the conditions that have resulted in the probable violations by the time the pipeline is placed into service.

2. Failure to correct deficiencies shall result in very substantial civil penalties.

3. A penalty for violation of 49 CFR 192 shall be considered at the time the pipeline is placed in service.

4. This docket shall remain active pending completion of the line and its placement into service.

Done and Dated this 11th day of June, 1984 by a vote of 5 - 0.

BY ORDER OF THE MONTANA PUBLIC SERVICE COMMISSION.

THOMAS J. SCHNEIDER, Chairman

JOHN B. DRISCOLL, Commissioner

HOWARD L. ELLIS, Commissioner

CLYDE JARVIS, Commissioner

DANNY OBERG, Commissioner

ATTEST:

Madeline L. Cottrill
Secretary

(SEAL)